

इंटरनेट

मानक

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Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 5447 (1978): Machine Chucking Reamers with Morse Taper Shanks [PGD 32: Cutting tools]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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Indian Standard

SPECIFICATION FOR
MACHINE CHUCKING REAMERS WITH
MORSE TAPER SHANKS

(First Revision)

1. **Scope** — Covers the dimensions and requirements for machine chucking reamers with morse taper shanks.
2. **Dimensions** — As given in Table 1.
3. **Tolerances** — Tolerance on cutting length *l* and overall length *L* shall be as given below:

All dimensions in millimetres.

Cutting Length <i>l</i> and Over- all Length <i>L</i>		Tolerance
Over	Up to and Including	
6	30	±1.0
30	120	±1.5
120	315	±2.0
315	1 000	±3.0

4. General Requirements

- 4.1 **Bevel Lead Angle** — 45° to be concentric with the diameter of reamer within 0.03 mm.
- 4.2 **Back Taper** — Back taper on the cutting diameter is recommended; when provided the amount of back taper shall be within the limits of tolerance on the diameter.
- 4.3 **Flutes** — Unless otherwise specified, straight flutes for right-hand cutting.
- 4.4 For requirements not covered in this standard, it shall conform to the requirements as given in IS : 5443-1969 'Technical supply conditions for reamers'.
5. **Sampling** — The sampling and criteria of acceptance shall be in accordance with IS : 7778-1975 'Methods for sampling small tools'.
6. **Designation** — A machine chucking reamer with morse taper shank having diameter *d* = 12.0 mm, made from high speed steel, conforming to this standard and suitable for a hole with tolerance H8, shall be designated as:

Chucking Reamer 12.0 IS : 5447

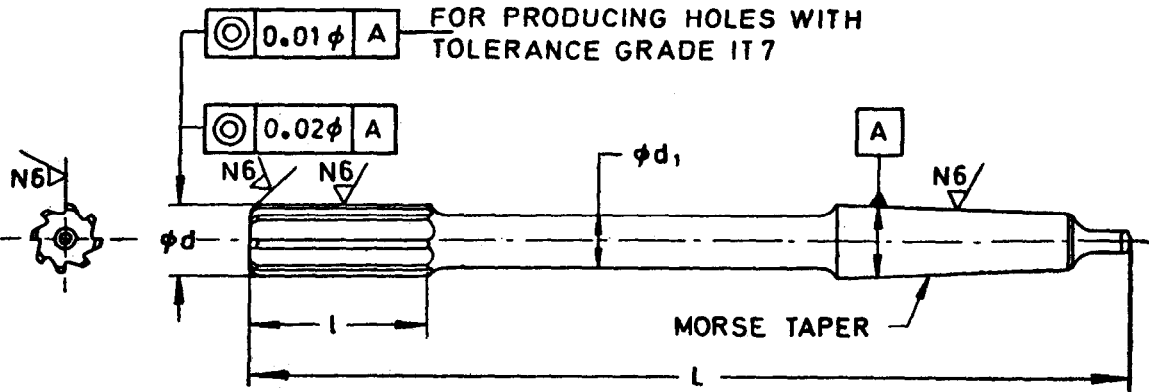
- 6.1 When the reamer is required for a hole with tolerance other than H8, an appropriate hole tolerance shall be included in the designation after size.

7. **Certification Marking** — Details available with the Bureau of Indian Standards.

TABLE 1 DIMENSIONS FOR MACHINE CHUCKING REAMERS WITH MORSE TAPER SHANKS
(Clause 2)

All dimensions in millimetres.

N9/ (N6/)



d* m6	Range of Diameter d		d1†	l	L	Morse Taper
	Over	Up to and Including				
5.5	5.30	6.00	5.0	26	138	1
6.0			5.0	26	138	
—	6.00	6.70	—	28	144	
7.0	6.70	7.50	6.5	31	150	
8.0	7.50	8.50	7.2	33	156	
9.0	8.50	9.50	8.0	36	162	
10.0	9.50	10.60	8.8	38	168	
11.0	10.60	11.80	9.8	41	175	
12.0	11.80	13.20	11.0	44	182	
(13.0)			11.0	44	182	
14.0	13.20	14.00	11.5	47	189	2
15.0	14.00	15.00	13.0	50	204	
16.0	15.00	16.00	14.0	52	210	
(17.0)	16.00	17.00	14.0	54	214	
18.0	17.00	18.00	15.5	56	219	
(19.0)	18.00	19.00	15.5	58	223	
20.0	19.00	20.00	17.5	60	228	
—	20.00	21.20	—	62	232	
22.0	21.20	21.40	17.5	64	237	
—	22.40	23.02	—	66	241	

*Recommended diameters, non-preferred sizes are given within parentheses.
†The values of d₁ are given for guidance only, but neck diameter d₁ shall always be less than the cutting edge diameter d.

(Continued)

TABLE 1 DIMENSIONS FOR MACHINE CHUCKING REAMERS WITH MORSE TAPER SHANKS — *Contd*

All dimensions in millimetres.

d^* m6	Range of Diameter d		d_1 †	l	L	Morse Taper
	Over	Up to and including				
—	23·02	23·60	—	66	264	3
(24·0)	23·60	25·00	21·5	68	268	
25·0			21·5	68	268	
(26·0)	25·00	26·50	21·5	70	273	
28·0	26·50	28·00	23·0	71	277	
(30·0)	28·00	30·00	23·0	73	281	
—	30·00	31·50	—	75	285	
—	31·50	31·75	—	77	290	
32·0	31·75	33·50	28·0	77	317	4
(34·0)	33·50	35·50	30·0	78	321	
(35·0)			30·0	78	321	
36·0	35·50	37·50	30·0	79	325	
(38·0)	37·50	40·00	30·0	81	329	
40·0			30·0	81	329	
(42·0)	40·00	42·50	30·0	82	333	
(44·0)	42·50	45·00	30·0	83	336	
45·0			30·0	83	336	
(46·0)	45·00	47·50	30·0	84	340	
(48·0)	47·50	50·00	30·0	86	344	
50·0			30·0	86	344	

*Recommended diameters, non-preferred sizes are given within parentheses.
†The values of d_1 are given for guidance only, but neck diameter d_1 shall always be less than the cutting edge diameter d .

EXPLANATORY NOTE

This standard was first published in 1969 and is being revised to bring it in line with the work done at ISO level. In the preparation of this standard considerable assistance has been drawn from ISO 521-1975 'Machine chucking reamers with parallel shanks or morse taper shank', issued by the International Organization for Standardization.

TO

IS : 5447-1978 SPECIFICATION FOR MACHINE CHUCKING REAMERS
WITH MORSE TAPER SHANKS

(First Revision)

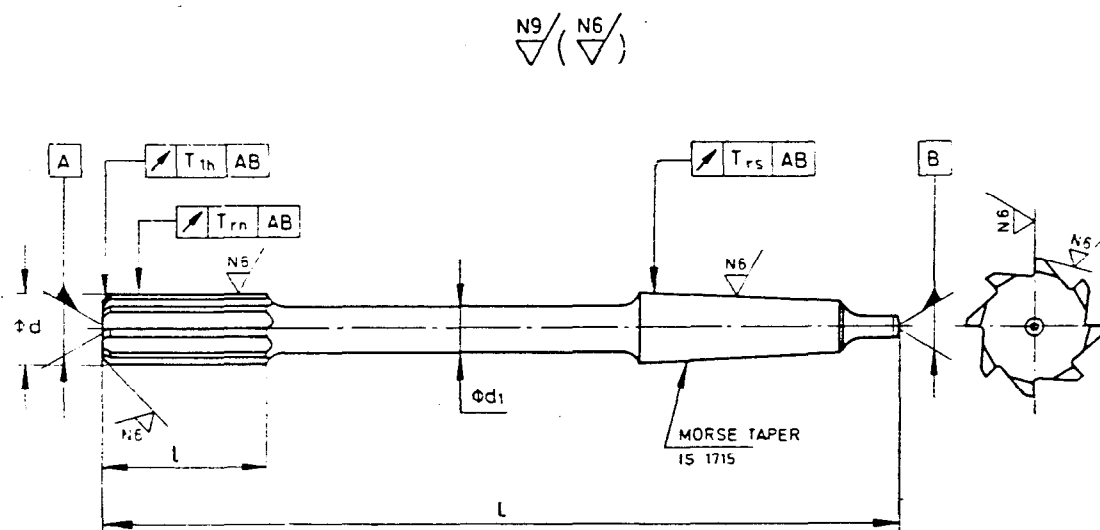
(Page 1, clause 4.1) — Substitute the following for the existing matter:

' Bevel lead angle shall be 45° . '

(Page 1, clause 4.4) — Substitute the following for the existing matter:

"For requirements such as terminology, material, hardness, tolerances, marking, protective coating and packaging, not covered in this standard, it shall conform to the requirements as given in IS : 5443-1984 ' Technical supply conditions for high speed steel reamers (first revision)'. "

(Page 2, Table 1, Figure) — Substitute the following figure for the existing figure:



AMENDMENT NO. 2 NOVEMBER 1990
TO
IS 5447:1978 SPECIFICATION FOR MACHINE
CHUCKING REAMERS WITH MORSE TAPER SHANKS

(First Revision)

(Page 1, clause 4.2) Substitute the following
for the existing clause:

"4.2 Back Taper Back taper on the cutting diameter
is recommended; when provided the amount of back
taper shall be in accordance with IS 5443:1984
'Technical supply conditions for high speed steel
reamers'."

(PED 10)

Reprography Unit, BIS, New Delhi, India

**AMENDMENT NO. 3 JANUARY 1997
TO
IS 5447 : 1978 SPECIFICATION FOR MACHINE
CHUCKING REAMERS WITH MORSE TAPER
SHANKS**

(First Revision)

(Page 1, clause 4.2 (see also Amendment No. 2)) — Substitute the following for the existing clause:

'4.2 Back Taper — Back taper on the cutting diameter is recommended, when provided the amount of back taper shall be in accordance with 7.3 of IS 5443 : 1994.'

(Page 1, clause 4.4) — Substitute 'IS 5443 : 1994' for 'IS : 5443 - 1969'.

(Page 2, Table 1, col 3) — Substitute '22.40' for '21.40'.

(PE 10)

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